July 12, 1960

Visit Report
Proj. OX
7/6/60

25X1A

Present: [redacted]

Rod's people thought the K.P. prototype spool looked promising. They may not want any flyable flange, thus may utilize only a shipping flange. The core hole may be small for their co-axial shaft diameter and the method of attachment of a drive gear
25X1A could be a problem. [redacted] would very much like to use present steel shipping containers. Elle may visit Rod in the near future to look at spool design problems.

Milt briefly described their camera, stating it is a f/3.8, T/6.3 (not considering the yellow GC-14 filter).

25X1A [redacted] reviewed his work on his method of speed determination based upon information content. This, plus his work on the phenadone X-80 developer, was well received by Research Lab. people. Building 59 reported on their tests, which confirm the speed increase and definition improvement of X-80.

The problem resolved into one of devising a practical continuous process matching X-80. This looks feasible, but X-80, as is, is on the border line of fog instability, which could give trouble.

Some time was spent in discussing the compatibility of this developer with an interrupted process. For a minimum scene brightness of 600 foot-lamberts, an X-80 process of 80-243 results in sufficient photographic speed to permit Rod's people to use their preferred exposure conditions. Thus, an interrupted process in which primary plus full secondary matches X-80 results would be satfactory. This is based, however, on the 600 foot lambert minimum for scene brightness. [redacted] agreed they would be willing to 25X1A accept some information loss on scenes of less than 600 foot-lamberts, by either accepting under-exposure or using longer exposure times on these scenes.

Since an interrupted process normally produces less speed than a one stage process, it may be difficult to formulate one matching X-80. However, the Research Labs. agreed to try.

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[redacted] work was based upon a relatively unfavorable assumption of scene brightness ratios of 2:1. Greater ratios should improve performance. Limited data on brightness ratios of several typical flights of the current program indicates the brightness ratio, as expected, is influenced significantly by terrain, and showed larger variations, with the maximum ratios up to 20 to 1. Although the procedure would be very laborious, currently available negatives could be analyzed to obtain an estimate of terrain contrast, to be used in programming future flights. Exposure control is possible with the P-E camera, as slit width can be changed during flight by pre-flight time programming.

The information criterion for speed and exposure selection used by P-E results in negatives with high minimum densities, approximately 1.0. This will cause some printing problems, but will give even more problems in visual analysis of the original negatives

It was stated that the web process will not yield sufficient speed for this application, so probably cannot be utilized.

Rod will need some near-operational film about 1 December and fully operational by January 1961. Thus, in addition to spool design, exact widths, lengths and special spooling requirements must be determined very soon and film should be ordered.

JSM/MDG

[redacted] 25X1A

cc: L.E.W.
C.F.H.
R.S.